REMARKS

Favorable reconsideration of this application, in light of the following discussion, is respectfully requested.

Claims 11 and 13-28 are pending.

I. Rejection under 35 U.S.C. § 103

In the Office Action, at page 2, numbered paragraph 2, claims 11 and 13-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,181,944 to Uebayashi et al. in view of U.S. Patent Pub. No. 2004/0152471 to MacDonald et al. This rejection is respectfully traversed because the combination of the teachings of Uebayashi and MacDonald does not suggest:

> receiving reports from the subscriber station at a receive station providing coverage for a radio cell in which the subscriber station is located, each report containing information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station and sent by a transmitting station;
>
> storing the reports in a memory of the receive station of the radio communication system providing coverage for the radio cell in which the subscriber station is located;...[and]
>
> estimating the position at a position determining unit taking into account at least two reports stored prior to the request for position estimation,

as recited in independent claim 11.

Uebayashi discusses a method to determine the runtime between a mobile station and a base station. When a user of the current mobile station or of another mobile station wants to check the position of the current mobile station, a position check request signal is transmitted to the mobile station device 100 from a base station which is currently in communication with this mobile station to determine the position of the mobile station. Then, upon receiving the position check request signal, the mobile station device 100 generates a first signal sequence PN1, which is transmitted to the base station device 200. Once this signal is received by the base station device 200, the base station device 200 generates a second signal sequence PN2, which is transmitted to the mobile station device 100. The second sequence PN2 is received with a delay due to the runtime (phase difference, see col. 5, lines 26 and 27) of the signal between the mobile station 100 and the base station 200.

When the second signal sequence PN2 is received by the mobile station 100, the phase of the second sequence PN2 is compared with the phase of the first sequence PN1 originally sent by the mobile station 100 (see col. 6, lines 46-57). Then the distance calculation unit 109 calculates a distance between the mobile station 100 and the base station 200 from this phase difference, and the position estimation unit 110 estimates the position of the mobile station 100 from the distance calculated by the distance calculation unit 109 and the base station position information of the base station 200.

In contrast, the present invention of claim 11, for example, is concerned with the signal strength of signals received by the mobile station and not with the runtime between the base station and the mobile station. In particular, the present invention determines the position of a mobile station based on reports received from the subscriber station (e.g., the mobile station) and stored in a memory at a receive station (e.g., the base station), which contain information regarding the signal strength of signals that have been transmitted by base stations and received by the subscriber station. Then when a request for positioning occurs, at least two of these reports are taken into account for the estimation of the position.

The present invention thus transmits a report of a signal strength at the mobile station, that is received and stored at the base station, so that when a request for position estimation is received at the base station, position estimation can immediately be carried out without additional time delay because the signal strength reports are previously stored at the base station. Further, the at least two reports are stored prior to the request for position estimation, so that when the position of the subscriber station (the mobile station) is estimated, such is done based on the signal strength reports that have already been stored at the receive station (the base station).

In Uebayashi, the position estimation reference signal and the position estimation response signal are transmitted to determine the runtime between the base station and the mobile station. However, the two signals PN1 and PN2 are not reports that indicate signal strength at a location of the mobile station 100 of a receive signal transmitted by a transmitting station and received by the mobile station 100, as the signals PN1 and PN2 are only response signals sent in response to a position check request signal and the first signal sequence PN1, respectively, and do not indicate the signal strength at the mobile station 100 of a receive signal received by the mobile station 100.

Further, the two signals PN1 and PN2 are not both stored in a memory of the base station 200 prior to a request for position estimation. The signals PN1 and PN2 are both transmitted only after the position check request signal has been transmitted.

Additionally, even if the first signal sequence PN1 is alleged to correspond with the request for position estimation, Uebayashi still does not estimate a position of the mobile station 100 taking into account at least two reports stored prior to the request for position estimation. The second signal sequence PN2 is only generated in response to the first signal sequence PN1 and is not a report that indicates signal strength that is stored at the base station 200 before the first signal sequence PN1 is received at the base station 200 because the receipt at the base station 200 of the first signal sequence PN1 causes the generation of the second signal sequence PN2. Thus, the second signal sequence PN2 cannot be construed to correspond with a report containing information relating to signal strength that is stored in a memory of the receive station (the base station) prior to a request for position estimation.

MacDonald fails to make up for the deficiencies in Uebayashi. MacDonald discusses in paragraph 14 that the processor of the mobile location module is configured to compare at least two signal strength values with at least two predetermined signal strength values associated with at least two geographical locations. This is an example of parallel processing of independent data sets. However, McDonald does not discuss or suggest that two successive sets of signals are received from the same mobile device and stored at the base station. In the present invention, the mobile device can be stationary and the reported signal strengths will not change, so the associated geographical location is the same. This is not the case with McDonald. McDonald describes parallel processing of information.

Therefore, as the combination of the teachings of Uebayashi and MacDonald does not suggest "receiving reports from the subscriber station at a receive station providing coverage for a radio cell in which the subscriber station is located, each report containing information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station and sent by a transmitting station; storing the reports in a memory of the receive station of the radio communication system providing coverage for the radio cell in which the subscriber station is located;...[and] and estimating the position at a position determining unit taking into account at least two reports stored prior to the request for position estimation," as recited in independent claim 11, claim 11 patentably distinguishes over the references relied upon. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Further, the combination of the teachings of Uebayashi and MacDonald does not suggest "a memory for storing the reports, which the receive station providing coverage for a radio cell in which a subscriber station is located has received from the subscriber station, in which the reports in each case contain information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station and sent by a transmitting station; [and] a transmitter to transmit, after a request for position estimation has been received at the receive station of the radio communication system, at least two reports stored *prior to* receiving the request for position estimation," as recited in independent claim 28. Therefore, claim 28 patentably distinguishes over the references relied upon. Accordingly, withdrawal of the §103(a) rejection is respectfully requested.

Claims 13-27 depend either directly or indirectly from independent claim 11 and include all the features of claim 11, plus additional features that are not discussed or suggested by the references relied upon. Therefore, claims 13-27 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Conclusion

In accordance with the foregoing, claims 11 and 13-28 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,
STAAS & HALSEY LLP

Date: December 4, 2009 By: _____

Kari P. Footland
Registration No. 55,187

1201 New York Avenue, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501